

A POPULAR TREATISE ON THE COMMON INDIAN  
SNAKES.

ILLUSTRATED BY COLOURED PLATES AND DIAGRAMS.

BY

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*Part XXII (with Plate XXII, Diagrams and Maps.)*

*(Continued from page 760 of Volume XXII.)*

The next three species dealt with in this series of papers belong to the genus *Zamenis*, and are *Z. fasciolatus*, *Z. ventrimaculatus*, and *Z. diadema*. *Z. mucosus*, the commonest, and most widely distributed has been already discussed in a former paper (Vol. XVII, p. 259). When Mr. Boulenger's catalogue appeared in 1896, the genus included 34 species chiefly Asian and American. Of this total 10 occur within Indian limits.

*ZAMENIS FASCIOLATUS.*

THE FASCIOLATED RAT-SNAKE.

*History.*—Russell in his great work on the Indian snakes, published in 1796, was the first to mention this snake, and this Volume contains an excellent coloured plate (No. XXI) of a handsomely marked juvenile specimen. Shaw in 1802, and Daudin in 1803, next referred to it, and then Cantor in 1839. Since then many writers have contributed scraps of information concerning it.

*Nomenclature.*—(a) *Scientific.*—It received its specific baptism in 1802. Shaw's name (a diminutive form of the Latin *fasciatus* "banded") having reference to the narrow crossbars usually so distinct in early life. It was assigned to its present place among the *Zamenis* by Günther in 1864. The generic name is from the Greek "*Zamenes*" meaning "very strong."

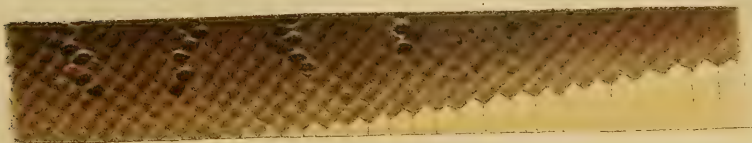
(b) *English.*—I can suggest no better name than the fasciolated rat-snake which is the equivalent of its scientific designation.

(c) *Vernacular.*—"Nooni paragoodoo" is the name Russell gives on the authority probably of natives in Vizagapatam, since "gedi paragoodoo" or "grass runner" is the name given to the Krait in the Vizagapatam District, according to the same author. I am told that "nooni" is Telugu for oil, and "paragudu" means "runner." The former word which I believe is also used for glistening is probably suggested by the smooth and polished character of the scales.

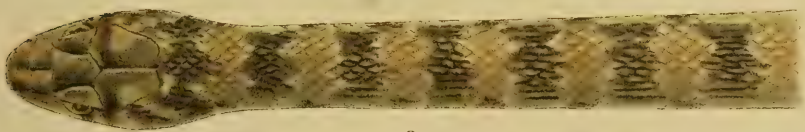
*Colour.*—The prevailing hue dorsally is some shade of brown, or olive-brown, some specimens being very light and almost yellowish, others very dark. Young specimens are beautifully ornamented



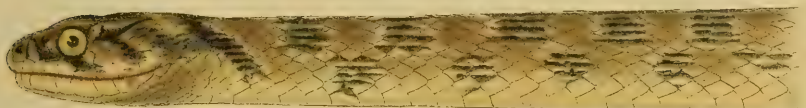
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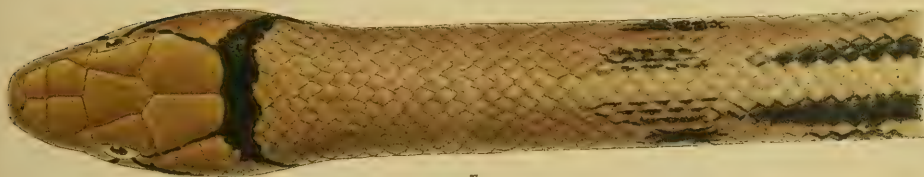
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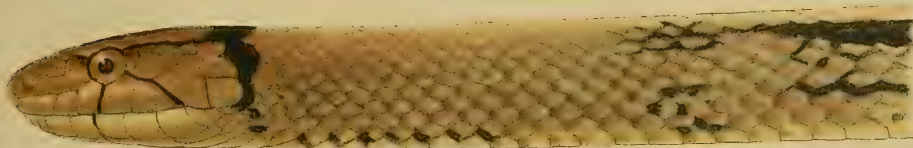
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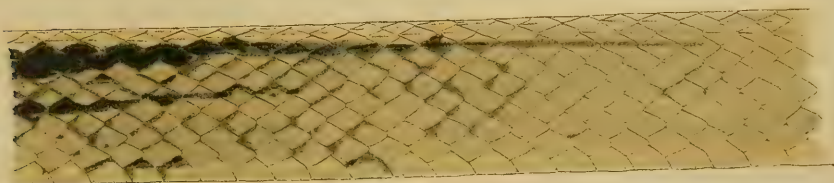
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7.

P. Gerhardt del.

J. Green, Chromo.

THE COMMON INDIAN SNAKES. (Wall)

1-2. *Zamenis fasciolatus*, harmless. 3-4. *Zamenis ventrimaculatus*, harmless.  
5-7. *Coluber radiatus*, harmless.  
all nat. size.



with crossbars, spotted or variegated with black and brown on a whitish ground. These bars are most conspicuous anteriorly and gradually disappear before, at, or at some distance behind the middle of the body. They become increasingly obscure as age advances, and some old specimens are nearly uniform in colour. The head is usually uniform olivaceous, and without any markings, but a young specimen of mine in Fyzabad was marbled with lighter hues. The belly is uniformly whitish, or yellowish. In my young specimen it was greenish-yellow.

*General characters.*—The head is of moderate length and width. The upper jaw projects rather prominently, and is sometimes rather parrot-like. A “*canthus rostralis*” is moderately evident. The nostril is of fair size, and occupies the upper two-thirds of the suture between the nasal shields. The eye is about half the length of the snout, and its round pupil easily discerned in life. A neck is fairly evident. The body is round, moderately long and smooth, and the tail is slender in form, and accounts for one-fourth to one-fifth the length of the snake.

*Identification.*—In many respects it is very like Hodgson’s rat-snake (*Coluber hadgsoni*), a Himalayan species. It bears a superficial resemblance to Cantor’s rat-snake (*Coluber cantoris*), another Himalayan form, and some other species of *Zamenis* and *Coluber* as well as the cobra. It is best recognised by attention to its scale rows first. These are usually 21 at a point two headlengths behind the head, 23 in midbody, and 17 two headlengths before the vent. Added to this the anal shield is divided; the supralabials are 8, the divided 3rd with the 4th and 5th, or the divided 4th with the 5th and 6th touching the eye; and the præocular touches the frontal shield.

*Length.*—It grows to upwards of three feet. The largest I have examined measured 4 feet  $2\frac{1}{2}$  inches.

*Disposition.*—It appears to be a plucky and vicious snake when molested. The few comments in this direction to be found in the literature on the species are in agreement. Stoliczka says it is rather a fierce snake when molested, and Blanford speaking of a specimen he encountered says, though young, it was one of the fiercest snakes he ever captured. The only specimen I have ever seen alive, probably a hatchling, was remarkably active and plucky. I understand from Mr. Millard, who is very familiar with it, that it is on account of its habit of flattening its body and a general resemblance in colour and appearance to a small cobra when moving that the Konkani natives so frequently declare it is a female cobra. My young specimen gave me a lively exhibition of its cobra-like behaviour. It erected itself probably as high relatively as a cobra would do, and flattened itself very remarkably.

*Habits.*—I believe it frequents jungly tracts chiefly, but will stray

into populated areas, and according to Stoliczka has been known to enter houses in Calcutta.

*Food.*—A specimen sent me from Patna had swallowed a rat. Stoliczka, however, remarks that it feeds on frogs and worms.

*Breeding.*—Very little is known in this connection. A specimen which I took to be a hatchling, measuring  $11\frac{1}{2}$  inches, was captured by me in Fyzabad in the month of July. Mr. D'Abreu told me of a hatchling he obtained in Patna in May.

*Distribution.*—Though Jerdon remarks that it is not uncommon in the Carnatic, this has not been my experience. I never obtained one when in residence in Southern India (Trichinopoly, Madras, Berhampore, Cannanore, and Bangalore), and I noticed that in the list of Travancore snakes given by Ferguson in this Journal (Vol. X, p. 68, and Vol. XIV, p. 386), this is not mentioned as one of the 58 land snakes enumerated. In my whole Indian career (19 years), I have had one specimen brought to me, *viz.*, in Fyzabad, and only one sent to me for identification, except the examples that have reached me from our Secretary from around Bombay. It is poorly represented in numbers in both the British and Indian Museums. The fact, however, that Nicholson supports Jerdon in saying that it is fairly common in Mysore; and Mr. Millard tells me it is quite a common snake in the Konkan, added to the fact that it is often mistaken for the cobra in the Konkan, and has a fairly wide distribution in Peninsula India justifies its inclusion in these papers.

It occurs in Northern Ceylon. In India it is found from Cape Comorin to the base of the Himalayas, excepting, perhaps, Travancore. It does not extend as far as Rajputana and the Punjab on the north-west, nor further east than Calcutta. I have elsewhere\* given good reasons for doubting the accuracy of the locality of Cantor's specimen in the British Museum said to be from the Province Wellesley in the Malay Peninsula. The exact localities known to me are shown in the accompanying map.

*Lepidosis.*—*Rostral*—Touches 6 shields; the rostro-internasal sutures usually greater than the rostro-nasal. *Internasals*—Two; the suture between them two-thirds to three-fourths that between the præfrontal fellows, about two-thirds the internaso-præfrontal suture. *Præfrontals*—Two; the suture between them subequal to the præfronto-frontal sutures; in contact with internasal, postnasal, loreal, præocular. *Frontal*—Touches 8 shields; the fronto-supraocular sutures about twice as long as fronto-parietals. *Supraoculars*—Length subequal to frontal breadth about two-thirds the frontal along a line connecting the centres of the eyes. *Nasals*—Two; in contact with the first and second supralabials. *Loreal*—One. *Præoculars*—One touching, or almost touching the frontal. *Postoculars*—Two.

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\* Pois. Terr. Snakes, Brit. Ind. Dom. 1908, Footnote, p. 21.



- (1) Jaffna (Wiley. Spol. Zeylan, April 1906, p. 33), (2) Anamallay Hill (I.M.), (3) Collagelly Hills (I.M.), (4) Mysore (Nicholson, Ind. Snakes, p. 87), (5) Madras (B. M.), (6) Ellore (Blanford, I. A. S. B. XLVIII, p. 115), (7) Vizagapatam Dist. (B. M.), (8) Calcutta (I. M.), (9) Monghyr (I. M.), (10) Patna (F. W.), (11) Benares (B. M.), (12) Allahabad (I. M.), (13) Fyzabad (F. W.), (14) Gwalior (B. M.), (15) Saugor (Bo. M.), (16) Nagpur (D'Abreu in epistola), (17) Salsette, Bombay, Thana, (Bo. M.), (18) Poona, Khandalla (Bo. M.)

B. M., implies British Museum; I. M., Indian Museum; Bo. M., Bom. Nat. Hist. Society's collection; F. W., the author.

THE COMMON SNAKES OF INDIA.



*Temporals*—Two; the lower touching three supralabials (usually the 5th, 6th and 7th). *Supralabials*—8; the 3rd, 4th and 5th or 4th, 5th and 6th touching the eye. Either the 3rd or 4th usually divided and touching the eye. *Infralabials*—6; the 4th, 5th and 6th, or 5th and 6th only, touching the posterior sub-linguals; the 6th largest and in contact with 3 scales behind. *Sublinguals*—Two pairs; the anterior rather the longer, the posterior completely separated. *Costals*.—Two headlengths behind head 21, midbody 23, two headlengths before vent 17. In the step from 21 to 23, a row appears on each side of the vertebral; in the reduction from 23 to 21 the two rows next to the vertebral unite; in the reduction from 21 to 19 (which occurs close to the preceding step, in fact, the absorption of rows in these two steps may be reversed), the 3rd above the ventrals is absorbed; in the reduction from 19 to 17, the 7th or 8th row above the ventrals is absorbed. Vertebrae not enlarged. No keels. Apical facets present in pairs.

*Ventrals*.—197 to 225. *Anal*—Divided. *Subcaudals*—73 to 92 in pairs.

*Dentition*.—(From a single skull in my collection). *Maxillary*, 13 subequal teeth, succeeded (after a gap that would accommodate one tooth), by two teeth little if any larger than the preceding ones. *Palatine* 11, decreasing in length from before backwards, the anterior subequal to the maxillary. *Pterygoid* 15 to 16, decreasing in length from before backwards. *Mandibular* 18, decreasing in length anteriorly, and posteriorly from about the 5th. I think the dentition is sufficiently distinctive to dissociate this species from the genus *Zamenis* in which several species with various dental characters are now grouped.

I take the view in this paper and for the reasons specified in a footnote that the forms of *Zamenis* described under the names of (1) *ventrimaculatus* (Gray), (2) *rhodorhachis* (Jan.), (3) *ladacensis* (Anderson), (4) *dorsale* (Anderson), and (5) *chesnei* (Martin), are all varieties of a single species for which the foremost name must stand having priority. Boulenger in his Catalogue (1893, Vol. 1, pp. 398 and 399) has already united Nos. 1 and 5, under the name *ventrimaculatus*, and Nos. 2, 3 and 4 under *rhodorhachis*, but distinguishes between these two\*.

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\* The descriptions of these two forms given by Boulenger in his Catalogue (1893) are identical with the exception of the ranges of the ventral, and subcaudal shields. I have now examined a large series of both forms from localities as widely separated as Almora in the East to Aden in the West. The dentition of all these agrees with that of the type of *ventrimaculatus* in the British Museum and the type of Anderson's *ladacensis* in the Indian Museum which I have also examined. I can discover no differences in lepidosis (examining specimens of each most critically side by side) except in the ranges of the ventrals and subcaudals. In one form both are more numerous than in the other. This becomes more noticeable in a comparison of the aggregates of these shields. Specimens of each agree in colouration, and they appear to grow to a similar length. I have examined the



## ZAMENIS VENTRIMACULATUS (GRAY).

## GRAY'S RAT-SNAKE.

*History.*—First referred to by Gray in 1834, who figured it in his Illustrations of Indian Zoology (Plate LXXX, Vol. II). The type specimen collected by General Hardwicke is in the British Museum, but the locality where found has been lost sight of. It is one of the few shielded forms. (Ventrals 206, subcaudals 98, Boulenger.) Under the name *Z. chesnei* Martin redescribed it in 1838. It has been redescribed under various other names, or confused with other species by many other authors.

*Nomenclature*—(a) *Scientific.*—“Ventrimalculatus” is from the Latin and implies spotted belly, in allusion to the irregular series of roundish spots seen at the edge of the ventrals in the forepart of the belly.

geographical distribution of each and append maps which show that their distribution is almost the same. One (the few shielded) extends South of the Indus whilst the other has not yet been recorded so far South in India. A list is also appended showing the number of specimens of each that I have examined and added to the specimens in Boulenger's Catalogue and the ventral and subcaudal ranges. I think from these considerations most herpetologists will hesitate to accept these forms as distinct species. In this paper, therefore, I treat them all as one species under the name *ventrimaculatus*.

## SYNOPSIS OF SPECIMENS.

|                    | No. of examples. | Range of ventrals.                 | Range of subcaudals. | Aggregate of foregoing. | Locality.  |
|--------------------|------------------|------------------------------------|----------------------|-------------------------|--|
|                    |                  | <i>Variety Typica.</i>             |                      |                         |  |
| Few shielded .. .. | 6                | 199-210                            | 82-112               | 281-321                 | } Persia.  |
| Many do. .. ..     | 13               | 214-241                            | 126-137              | 341-376                 |  |
| Few shielded .. .. | 2                | 207-209                            | 109-112              | 316-331                 | } Aden and around.                                       |
| Many do. .. ..     | 10               | 222-236                            | 124-138              | 346-372                 |  |
| Few shielded .. .. | 17               | 194-211                            | 95-121               | 295-326                 | } Sind, Baluchistan, Thar and Parkar, Rajputana, Punjab. |
| Many do. .. ..     | ..               | ....                               | ....                 | ....                    |  |
| Few shielded .. .. | 13               | 190-221                            | 101-125              | 293-335                 | } W. Himalayas, from Almora to Gilgit, and Chitral.      |
| Many do. .. ..     | 10               | 215-246                            | 126-145              | 347-391                 |  |
|                    |                  | <i>Variety rhodorhachis (Jan.)</i> |                      |                         |  |
| Few shielded .. .. | ..               | ....                               | ....                 | ....                    | } Persia.  |
| Many do. .. ..     | 6                | 217-235                            | 125-137              | 347-363                 |  |
| Few shielded .. .. | 2                | 211-222                            | 111-122              | 322-344                 | } Chitral.   |
| Many do. .. ..     | ..               | ....                               | ....                 | ....                    |  |

(b) *English*.—For want of a better title, and owing to the difficulty of finding anything distinctive in this member of a large genus, I propose to associate Gray's name with it.

(c) *Vernacular*.—According to Captain Shakespeare who sent 7 young specimens to our Society's collection from Koweit on the Persian Gulf it is called "dawaib-al-khail" in Arabia.

*Identification*.—The scale rows two headslengths behind the head are 19, in midbody 19, and two headslengths before the vent 15, or more commonly 13. The anal shield is divided. The supralabials are 9; the 4th divided and the 4th, 5th and 6th touching the eye (less commonly they are 8; the 3rd divided and the 3rd, 4th and 5th touching the eye).

There are only about 12 others of our Indian snakes with the scale rows as given above. 6 of these have an entire anal shield, and none have the condition of the supralabials peculiar to this species. The divided 3rd or 4th supralabial must be carefully looked for (see figure).

*General characters*.—This is a remarkably graceful species, the body is smooth on the surface, round, slender and elongate, and the tail is unusually long, and tapering accounting for more than one-fourth the total length. The head is moderately narrow, and the snout moderate in length, and obtuseness. The nostril occupies about the upper two-thirds of the suture between the nasal shields. The eye of medium size has the pupillary border of the iris fine specked with gold, so that the round shape of the pupil is clear evident in life. A neck is moderately evident. The attenuation of the body is very gradual, and continues so insidiously that the origin of the tail is barely if at all indicated. The belly is slightly angulated on each side.

*Colour and varieties*.—The variety *typica* of Gray, and far the commonest variety is very variable in its prevailing tones and markings. It may be dirty yellowish, olive-greenish, olive-brownish, stone coloured, or greyish. The posterior part of the body for a variable length, and the tail are uniformly coloured. Anteriorly the body is variously marked with spots, or crossbars, or both. A common form is shown in our plate where crossbars are evident, alternating with a single series of largish costal spots. These bars may be as long as the intervals, as in our plate, or only half the length. In another very common form there are no crossbars, but 5 or 6 rows of small spots arranged quincuncially. In some 3 series of small spots alternate with one another each side, and the uppermost with a series of narrow crossbars. The head partakes of the prevalent dorsal hue, and exhibits a blackish spot on the lore, a blackish oblique stripe below the eye, another on the temporal region to the gape, a band between the eyes, and various marks on the occiput. A crossbar, or a single longitudinal stripe, or twin stripes may